



NORTHWOODS JOURNAL - AUGUST 2023

A Free Publication about Enjoying and Protecting Marinette County's Outdoor Life

In This Issue:	
New Menominee Historical Site	1
Prairie Walk at Harmony	1
Drone Use in Natural Resources	2
Supreme Court Limits Clean Wate Act Safeguards for Wetlands	r 3
The Governor Visits Peshtigo	3
Repairing Local Ecosystems with Native Plant Gardening	4
Soil Health Principles	5
Don't Fear the Cicada Killer	5
Meet the American Badger!	5
PFAs Funding Bill in the Works	6
Outdoor Learning with T.O.A.D.	6
Become a Master Gardener! Onlin Course Open for Registration	e 7
What's New at Harmony?	7
Harmony Upcoming Events	8



Tips to Help Pollinators; & P.I.G.

8

garden Updates

Prairie Walk at Harmony Arboretum



A prairie walk will be held on **Thursday, August 3, from 5:30-7:00 p.m.** to learn more about our native prairie ecosystems and the plants and animals that live there. It's a beautiful time of year for prairie plants and many are in bloom. Led by native plant enthusiasts Linda Warren and Adrian Konell, you'll see a great variety of native prairie plants. Wear good walking shoes; insect repellant is recommended.

For information about these programs and more, see the Harmony Arboretum Calendar on page 8, or visit www.marinettecounty.com. The Harmony Arboretum is located 7 miles west of Marinette, ½ mile south of State Highway 64 on County Road E. It's open to the public year-round and free!

Menominee Site Receives National Historic Designation

https://www.wpr.org/menominee-site-receives-national-historic-designation-companyseeks-mine-gold



The National Park Service has approved the Menominee Indian Tribe's nomination of a culturally significant site to the National Register of Historic Places. The land is located where a controversial gold mine is set to be developed. Last year, historic preservation boards in Wisconsin and Michigan approved the nomination of *Anaem Omot*, also known as 'the Dog's Belly'. The site on the Menominee River includes the Sixty Islands area where the tribe once lived, and it contains the tribe's dance rings and burial mounds.



The tribe's application to list the site was returned earlier this year to those boards in Michigan and Wisconsin. The Wisconsin State Historic Preservation Office worked with the tribe and Michigan to make technical corrections that were requested by the Park Service. The agency received the revised nomination in May, and its website states the site was <u>listed</u> Tuesday on the National Register. In a statement, Menominee Tribal Chairwoman Gena Kakkak said she was overwhelmed with gratitude.

"We are so very thankful to the National Park Service for including this site on the National Register of Historic Places. Our ancestors can now rest better in their places of burial," Kakkak said. "Our original spiritual and ceremonial grounds are recognized and our children can continue to learn and find their heritage in our places of origin." Tribal Historic Preservation Director David Grignon said in a statement that the listing has been "a long time in coming, but now our sacred sites, mounds and historic sites on the Menominee River at Sixty Islands are recognized."

Tribal Historic Preservation Director David Grignon said in a statement that the listing has been "a long time in coming, but now our sacred sites, mounds and historic sites on the Menominee River at Sixty Islands are recognized."

The site is located about 16 miles east of Stephenson, Michigan. The area is part of the tribe's ancestral territory, and the tribe settled all along the Menominee River. According to the tribe, the settlement remains at Anaem Omot date back roughly 10,000 years to the last Ice Age. The tribe has worked for several years to protect the area in Wisconsin and Michigan that contains garden beds and ceremonial sites in addition to the tribe's burial mounds.



Burial mound located at one of the cultural sites near the Menominee River (from http://www.wrpc.net/articles/michigan-board-votes-to-add-ancient-menominee-site-to-national-register-of-historic-places-pro-mining-michigan-legislators-oppose-vote/)

The site is also where Gold Resource Corp. wants to mine gold and other metals for the Back Forty project. The company obtained the project when it acquired Toronto-based Aquila Resources in late 2021. Aquila planned to build a 750-foot deep, open-pit mine on 83 acres to extract gold, zinc and other metals, according to the Detroit Free Press. The project would have come within 150 feet of the Menominee River.

The tribe has made no secret of its opposition to the Back Forty project. Even so, Stefanie Tsosie, a senior attorney with Earthjustice who represents the tribe, said the nomination is about protecting cultural resources.

The Menominee tribe has been pushing for this listing regardless of whether there's a mine there," Tsosie said. The Menominee tribe had also challenged wetlands permit that Michigan regulators issued for the mine in 2018. In 2021, a Michigan administrative law judge revoked that permit. The tribe also won its appeal of regulators' decision to issue a mining permit for the project. A Michigan judge ruled in April 2021 that the permit should be sent back for further review of potential impacts to Aquila eventually withdrew groundwater. those permits. Now, Gold Resource Corp. is currently conducting a feasibility study of the Back Forty mine.

Continued next page

What's A-buzz in the Forest? Drones & Natural Resources

https://www3.uwsp.edu/cnr-ap/leaf/Pages/LEAFlet-Archives.aspx (May issue)



Wisconsin DNR Game Warden Brandon Smith, of Kenosha County, demonstrates the use of a drone, a piece of gear that is being used by more and more Wisconsin game wardens.

Drones, or unmanned aerial vehicles (UAVs), have been used for over 100 years. Not including balloons, the first **UAVs** were tested in 1917 during the First World War. Recreational drones are a much more recent phenomenon. Miniaturization of radio controlled (RC) components in the 1960s led to a thriving hobbyist use of RC airplanes. Now, who has not heard the buzzing of a drone in a park or on a beach or even in your neighborhood? It did not take long for today's quadcopter drones to be considered for use in natural resources research and management.

Wisconsin Department of Natural Resources has an aeronautics program within the Division of Forestry. Program Section Chief Paul Christensen shared that the program has 11 fixed-wing and 13 drone aircraft which are used to map forest cover types, assess forest health including invasive species and oak wilt infestations, conduct wildlife surveys, assess storm damage, and assess and fight wildland fire. The program employs nine full-time staff and many part-time staff in several locations around Wisconsin. The Department's Law Enforcement Division and Applied Science Division also use drones; however, forestry uses them most often.



What makes drones so incredibly useful in natural resource management is the ability to gather information more safely and efficiently with them than traditional observation platforms. Use of infrared (IR) imaging gathers observations of temperature variance, especially useful for picking out hotspots in smoky wildland fires or counting warm-bodied ducks on the water. Students in the College of Natural Resources at UW–Stevens Point used drones for duck surveys in Dr. Ben Sedinger's research (below).





Drones can be used for many applications in agriculture, forestry, and wildlife conservation - such as seeding deforested areas after wildfires or observing wildlife.



On the ground, biologist James Junda controls the drone, while one of his assistants, Frederic Letourneux watches out for the soon-to-be parents in Frenchtown, MT (taken from a Draganflyer X4 using a GoPro Hero 1).

Unfortunately, the ubiquitous use of drones has been dampened by their careless use around protected airspace. Now, anyone flying a drone recreationally should complete the Recreational UAS Safety Test, and if flown in certain types of air space or for professional purposes, Part 107 certificate is required.

Educators seeking to use drones as an instructional tool should complete the Federal Aviation Administration free online Part 107 training course, which takes less than 30 hours to complete. Completion of this course would allow students to fly drones under your direct supervision. How cool would that be?

It is only natural that the more career opportunities there are, the more the demand for students with these skills there will be. Perhaps Part 107 training will be in your next Professional Development Plan!

Special thanks to:

Paul Christensen, Wisconsin Department of Natural Resources; Jennifer Summers, Wisconsin Wildlife Center, College of Natural Resources, UW-Stevens Point; and Jacob Tepsa, Wildlife Ecology major, College of Natural Resources, UW-Stevens Point; for providing interviews for this feature.

More information about drones in natural resources:

- ✓ https://www.outdoornews.com/2023/05
 /16/drones-prove-helpful-to-wisconsinwardens-field-work/
- √ https://issuu.com/08290/docs/cnr_newsle
 tter-summer 2022/s/16915710
- √ https://www.fs.usda.gov/managing-land/fire/uas/resource-management
- ✓ https://thedronesworld.net/drones-plant-trees-to-end-deforestation-in-the-world/
- https://www.nature.org/en-us/aboutus/where-we-work/unitedstates/colorado/stories-incolorado/colorado-drones-forconservation-feature/
- https://www.audubon.org/magazine/julyaugust-2014/drones-take-wildlifeconservation-tool

Menominee, continued

The company said it's committed to the preservation of all known cultural resources in the vicinity of the project, according to Steve Donohue, vice president of environment and regulatory affairs in Michigan for Gold Resource Corp.

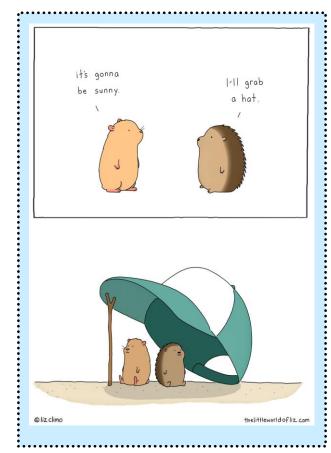
"The company is committed to a constructive dialogue with the Menominee Indian Tribe, so that we can communicate on the project and further understand their concerns as it relates to the project and their cultural interests in the area," Donohue said.



Donohue said the feasibility study will examine redesigning the project, which would consider environmental and cultural resources in the area. He said that study won't be completed until later this year. "After that point in time is when the company would start reinitiating activities related to permit applications," Donohue said.

Tsosie with Earthjustice said the site's listing is not a prohibition on development, but she said it would require an extra layer of review. "State and federal agencies will have to look at projects and how it might impact the historical nature of that area," Tsosie said. In the meantime, Donohue said the company has been in discussion with the tribe to arrange a site visit sometime this summer, so they can conduct surveys of wetlands and cultural resources. Tsosie said the tribe is interested in visiting the area, but nothing has yet been finalized.







Peshtigo Hosts Governor Evers

https://peshtigotimes.com/content/governor-tony-evers-visits-peshtigo

Wisconsin Governor Tony Evers was in Peshtigo Friday, June 9 to announce the City of Peshtigo will receive a grant of \$92,000 for the Peshtigo River Boat Launch Improvement project. The city will significantly upgrade the existing boat landing located next to the City of Peshtigo Public Works building on East Front Street. The existing narrow, single-lane ramp is inadequate for the size of many new fishing boats and the landing becomes congested during the spring walleye run when upwards of 100 boats use the river at the same time.



Chuck Druckrey, (left) Water Resource Specialist for Marinette County along with Mayor Cathi Malke explain to Governor Evers and Kathy Blumenfeld Department of Administration Secretary the importance of the Boat Launch Project to the city.



Governor Evers toured the new fish viewing platform in Peshtigo near the dam. Governor Evers listens as Mayor Malke and Chuck Druckrey talk about the recent walleye run and the amount of people that stopped by to see the fish.



Supreme Court Limits Federal Safeguards for Wetlands Under Clean Water Act

Excerpts from: https://wildlifemanagement.institute/outdoor-news-bulletin/june-2023/supreme-court-limits-federal-safeguards-wetlands-under-clean-water



The Supreme Court ruled on May 25 in a case that questioned the Environmental Protection Agency's (EPA) ability to regulate wetlands under the Clean Water Act. In a unanimous decision, the Supreme Court affirmed an Idaho couple's ability to build a home on their property that is a few hundred feet from Priest Lake, reversing a decision made by the U.S. Court of Appeals for the 9th Circuit that sided with the EPA.

However, the court was also split within the ruling on what is known as the "significant nexus" test to interpret whether wetlands are connected to navigable waters. The 5-4 majority ruling found that the EPA's authority applied only to those wetlands that are indistinguishable from and have a "continuous surface connection" to larger lakes, oceans, streams, and rivers. The decision is considered a win for small property owners but significantly reduces protections for wetlands.

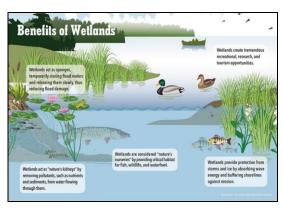
The case, Sackett v. Environmental Protection Agency, centers on property owned by Chantell and Michael Sackett near Priest Lake, Idaho. After obtaining permits and beginning construction on their home in 2007, they were informed by the EPA that their property contained wetlands and they needed federal permits to continue work. Construction of the home has been on hold ever since while the Sacketts appealed an EPA compliance order threatening tens of thousands of dollars in fines through the courts. All nine of the court's justices were unanimous in the decision that the Clean Water Act does not apply to the Sackett's property and that the previous interpretation of "waters of the U.S." was unworkable.



In his opinion concurring only with the judgment, Justice Brett Kavanaugh agreed that the Sackett property does not meet the significant nexus test, but that the majority had "rewritten the Clean Water Act" and ignored its text as well as "45 years of consistent agency practice." Kavanaugh noted that eight different administrations since 1977 had recognized such wetlands as being protected. The statutory text, Kavanaugh wrote, "does not require a continuous surface connection between those wetlands and covered waters." "...The Federal

Government has long regulated the waters of the United States, including adjacent wetlands... the decisive point here is that the term "adjacent" in this statute is unambiguously broader than the term "adjoining." On that critical interpretive question, there is no ambiguity. We should not create ambiguity where none exists. And we may not rewrite "adjacent" to mean the same thing as "adjoining," as the Court does today," Kavanaugh wrote.

Kavanaugh insisted that the lands to be regulated did not have to physically touch a nearby waterway to constitute "waters of the United States," but that they could include wetlands that are "separated from a covered water only by a man-made dike or barrier, natural river berm, beach dune or the like." He concluded: "The wetlands on the Sacketts' property do not fall into either of those categories and therefore are not covered under the Act as I would interpret it." Chief Justice Samuel Alito countered the minority statements in the Opinion of the Court, stating: "We have analyzed the statutory language in detail, but the separate opinions pay no attention whatsoever to §1362(7), the key statutory provision that limits the CWA's geographic reach to "the waters of the United States."



Reaction to the Supreme Court's decision has been varied. Most within the conservation community have raised concern about the potential impacts of the decision on wetlands conservation. "For 50 years the Clean Water Act has been instrumental in revitalizing and safeguarding drinking water sources for people and wildlife, wetlands for flood control, and habitats that sustain our wildlife heritage," said Jim Murphy, director of legal advocacy for the "Federal National Wildlife Federation. protections that don't depend on local politics or regional polluter influence are essential to vulnerable and disadvantaged communities nationwide. The court's ruling removes these vital protections from important streams and wetlands in every state. We call on both Congress and state governments to step in, plug the gap, and protect our threatened waters and the people that depend on them."

However, the Property and Environment Research Center countered that the ruling could inspire new opportunities to incentivize voluntary conservation efforts on private lands. "Today's ruling brings significant clarity to federal wetlands regulation but also signals the need to ramp up voluntary wetlands conservation," noted PERC Vice President of Law and Policy Jonathan Wood. "... Now that fewer wetlands will be regulatory liabilities for private landowners, it's time for voluntary conservation efforts to make wetlands an asset to landowners."

Native Gardens are Repairing Local Ecosystems

https://www.csmonitor.com/Environment/2021/0819/This-isn-t-just-weeds-Native-gardens-are-repairing-local-ecosystems



Swallowtail larva on Golden Alexanders – a native perennial

It's a hot summer afternoon in St. Louis, and Dawn Weber's yard is teeming with life. A gray catbird meows over the low hum of bees, as dragonflies skip across the still water of the garden's pond. At just over a quarter of an acre, the carpet of wild violet and native plants around Ms. Weber's house is home to about 38 species of butterflies and 99 species of birds.

"I really enjoy seeing the life," she says. "There are about 300 species of plants between the front and the back [yards]." Ms. Weber is among the growing number of homeowners who have traded manicured lawns for wild and diverse "naturescaped" gardens. Her garden includes native species, such as yellow bell flowers and queen of the prairie, and features a small, lily-covered pond. It's also a certified wildlife habitat, a recognition Ms. Weber earned after becoming involved with the St. Louis Chapter of Wild Ones – a national organization that provides resources for homeowners and others interested in cultivating native plants to support local ecosystems. Ms. Weber began as a volunteer in 2013, and today she is the vice president of the Wild Ones' largest and most active chapter.



The trend of planting native and wildlife gardens is on the rise nationwide. So far this year, an estimated 67.2 million American households specifically purchased plants to help butterflies, bees, and birds, and an estimated 30 million adults converted part of their lawn to a natural or wildflower landscape, according to a 2021 survey by the National Garden Association and the University of New Hampshire. The popularity of native gardening follows growing awareness of the need for species conservation in local ecosystems.

"The plants and animals around us run the ecosystem," says Doug Tallamy, professor in the Entomology and Wildlife Ecology Department at the University of Delaware. But, he adds, "We're losing our insects, we're losing our plants and losing our birds. This is a serious biodiversity crisis."



"And it stems from the fact that we've taken away the [native] plants or used incorrect plants [to landscape]," he says, "Not all plants support the insects that run the food webs that feed the birds and everything else." The use of harmful pesticides also affects the food web, hurting pollinator insects like bumblebees and butterflies, as well as wildlife such as hummingbirds and song birds.

Fixing the food web

This breakdown of the food web has triggered what environmental experts call a global mass extinction event. But conservation experts think anyone with a yard or even a deck outside an apartment can be part of the solution. The United States currently has more than 40 million acres of land dedicated to lawns. Although wide expanses of mowed green lawns may look pleasing to the eye, Professor Tallamy calls them "dead-scapes,"-land that does not support biodiversity or the local ecosystem.

Native gardens of any size in residential areas form "conservation corridors" that support local wildlife. Local pollinators such as butterflies, bees, and moths depend on these conservation corridors and in turn support creatures higher on the food chain, such as "If you add all of the residential landscape, it's far more than our national park systems combined," says Dan Pearson, coordinator of the Bring Conservation Home program, a community outreach program run by the St. Louis Audubon Society. "If enough people could dedicate a significant portion of their landscape to the native plants that have co-evolved with the insects in [their] ecosystem, we could reduce the impact and maybe even stop the mass extinction event," says Mr. Pearson.



From lawns to habitats

Since 2011, the Bring Conservation Home Program has completed 1,500 site visits in St Louis, with 150 more requests to fulfill before the end of the year. Homeowners who transform their land into a native garden can apply for official wildlife habitat certification. As of 2020, there are more than 260,000 certified wildlife habitats registered with the National Wildlife Federation, the largest private nonprofit organization dedicated to conservation education and advocacy. Once homeowners fulfill the requirements provision of food, water, shelter, and a place for wildlife to raise their young, along with the use of sustainable practices - they receive a sign to post in their garden.

"You get a sign that says, 'This is a certified wildlife habitat,'" Mr. Pearson says. "It helps to tell the neighbors, 'Hey, this isn't just weeds." Signs are very important for native and wildlife gardeners who may face resistance from suspicious neighbors and homeowners association rules that limit how much of their land can be dedicated to native species.



"A lot of times it's subdivisions with homeowners associations [that resist the change] because they feel like it's going to bring down the property value," Ms. Weber says. "But there are things that people can do to make that landscape more formal," she adds, such as choosing shorter native plants. For those without land of their own who want to provide habitats for wildlife, there are other ways to get involved.

"If you live in an apartment complex and the grounds have any trees, adopt a tree," suggests Professor Tallamy, including taking care of the soil around the base of the tree to make it more habitable for native insects that spend a good portion of their life cycle in the earth beneath the trees. He also encourages people to volunteer at parks.

"I always tell people that you start small," Ms. Weber says as she leans over a garden bed, inspecting the purple buds of the downy skullcap – a spiky, perennial plant native to the Midwest that attracts pollinators. "It gives you the opportunity to learn from your mistakes and make big changes."





Northwoods Journal Online

Do you want to read current issues of the Northwoods Journal online or catch up on past issues? Visit www.marinettecounty.com and search for "Northwoods Journal." We can also send you an e-mail reminder when a new issue is posted online, or we can mail you a paper copy if you prefer. Email Anne Bartels, Information & Education Specialist, at anne.bartels@marinettecountywi.gov or call 715-732-7780.

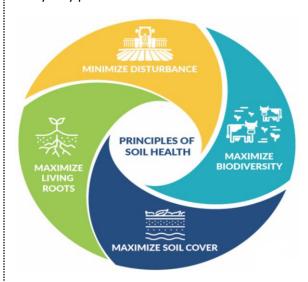


Soil Health Principles

https://www.nrcs.usda.gov/conservationbasics/natural-resource-concerns/soils/soil-<u>health</u>



How can we avoid deadly dust storms? And how do we keep valuable topsoil on our fields and gardens? Follow soil health principles in every way possible:



What is Soil Health? Soil health is defined as the continued capacity of soil to function as a vital living ecosystem that sustains plants, animals, and humans. Healthy soil gives us clean air and water, bountiful crops and forests, productive grazing lands, diverse wildlife, and beautiful landscapes. Soil does all this by performing five essential functions:

- Regulating water Soil helps control where rain, snowmelt, and irrigation water goes. Water flows over the land or into and through the soil.
- Sustaining plant and animal life The diversity and productivity of living things depends on soil.
- Filtering & buffering potential pollutants -The minerals and microbes in soil are responsible for filtering, buffering, degrading, immobilizing, and detoxifying organic and inorganic materials, including industrial and municipal by-products and atmospheric deposits.
- Cycling nutrients Carbon, nitrogen, phosphorus, and many other nutrients are stored, transformed, and cycled in the soil.
- Providing physical stability and support -Soil structure provides a medium for plant roots. Soils also provide support for human structures and protection for archeological treasures.

As world population and food production demands rise, keeping our soil healthy and productive is of paramount importance. By farming using soil health principles and systems that include no-till, cover cropping, and diverse rotations, more and more farmers are increasing their soil's organic matter and improving microbial activity. As a result, farmers are sequestering more carbon, increasing water infiltration, improving wildlife and pollinator habitat - all while harvesting better profits and often better yields.

Don't Fear the Cicada Killer Wasp

https://content.govdelivery.com/accounts /MIDNR/bulletins/363ff0b#link 16

The soundtrack of the hot, hazy days of late summer - times of lazy summer vacations and cookouts with friends and family sounds like the drone of a cicada (below). But for one animal, the sound of a cicada means something very different: survival.



From https://hort.extension.wisc.edu/articles/cicadas/

As cicadas emerge from the ground to call in the trees, another insect comes out as well the cicada killer wasp. Measuring over an inch in length, these wasps are built to capture and subdue large adult cicadas. Only female wasps have stingers, which they use to inject venom into their prey and carry it back to their burrow.



Cicada killer wasps are solitary, and female wasps use their short time as adults to dig burrows where they stash the cicadas they catch and lay their eggs. While male wasps may be territorial or act aggressively, they lack a stinger and pose no danger to people; females sting only in self-defense. Just like the cicadas, cicada killer wasps die as summer wanes.



"You may see these wasps while you're outside this year and immediately think of the stories of giant murder hornets invading North America," said DNR game biologist Karen Cleveland. "Don't worry. This secretive native insect has been here all along, and can be found silencing cicadas across the entire eastern U.S." Cleveland said that if you're a good neighbor and respect the wasps' space, they'll be with us for a long time to come.

See more information about cicada killer wasps from Michigan State University Extension.

Meet the American Badger, Wisconsin's State Mascot!

https://www.facebook.com/NatureNet

MADISON MAMMAL

their feistiness. They are the winter, consider yourself snarl, growl, or even give their time deep underground of a smelly scent if if they are bothered

Badgers are known for If you spot a badger during tough fighters who will lucky! Badgers spend 90% of in their den, which can get 30 degrees watmer than





At left, European Badger; at right, American Badger

The badger is known to be ferocious and aggressive. It's unlikely that you've been able to spot one as they are solitary most of the year and prefer to stay hidden inside their shallow dens in the daytime. With a sense of smell almost as strong as a dog, badgers can sniff out food very well and typically search for squirrels, rabbits, and small birds.

DID YOU KNOW?

Wisconsin being called "the badger state" dates all the way to the 1800s. As miners dug tunnels into hillsides and lived in them during winter months, they reminded people of badgers and the name stuck!



Say hello to Bucky Badger! Seriously, here are more facts about our state mascot.

- Badgers are small mammals with wedgeshaped bodies, long hair, and large claws.
- Badgers live in underground burrows called setts, and are one of the few mammals that live in groups.
- Badgers eat mostly insects, but also frogs, lizards, birds and plants.
- Badgers dig burrows with long tunnels and a large room for sleeping. They are clean animals. They go outside to poop and they line their sleeping rooms with clean grass or leaves.
- Badgers don't hibernate during the winter, but they go into a deep sleep called torpor. During torpor, their body temperature and heart beat goes down. Badgers sleep for a day or two, wake up to eat, and sleep some more.
- Badgers are shy, but they are also brave. They will fight animals much larger than themselves if frightened. Badgers can fight off wolves, coyotes, dogs and even humans.
- Badgers keep mice and other rodents under control!

PFAS Funding Bill – If Changed – Could Mean Progress

https://wisconsinrivers.org/pfas-funding-bill-if-changed-could-mean-progress/ (June 2023)

The latest on PFAS in Wisconsin

Wisconsin's Joint Finance Committee voted on May 18 to approve \$125 million for a "trust fund" to address perfluoroalkyl and polyfluoroalkyl substances, or PFAS contamination. The amount is more than what Governor Evers included in his budget proposal, but the JFC delayed deciding specifics on how the money would be used by the state.

On May 24, Senator Eric Wimberger (R – Green Bay) introduced SB 312 which would create the programs to spend the PFAS trust fund. While the promise of funding to deal with PFAS contamination could be a step in the right direction, the bill must be amended to make sure the programs are fair, consistent, and will have state agency staff to help communities with polluted drinking water.

The basics on PFAS pollution

Perfluoroalkyl and polyfluoroalkyl substances, collectively known as PFAS, are a very large class of chemicals that have been in use for over sixty years. The U.S. Environmental Protection Agency says there are over 12,000 individual PFAS. They are used in a wide array of products such as cosmetics, microwave packages, rain coats, non-stick cookware and more.



Because there are so many PFAS and they have been used for so long, they are found pretty much everywhere in the environment. They are known or suspected of causing reproductive effects, developmental effects, increased risk of some cancers, impairment of the immune system, interference with natural hormones, and increased cholesterol levels. They are commonly referred to as "forever chemicals" because once they contaminate water and soil, they are extremely hard to remove or remediate.

In Wisconsin, communities are finding PFAS contamination in communities of all sizes, from Marinette, La Crosse, Wausau, Madison, to the Town of Stella, population 633. River Alliance of Wisconsin has a PFAS timeline that includes pivotal events in our state and links to maps of PFAS pollution hotspots.



A map shows the approximate locations of Wisconsin Department of Natural Resources PFAS contamination investigations. The numbers by each marker represent the number of open investigations in each community. (Credit: Wisconsin Department of Natural Resources)

What the Senate Natural Resources and Energy Committee should change in SB 312

On Thursday June 1, the Senate Natural Resources and Energy Committee scheduled a hearing on SB 312 on Monday, June 5 at 11:00 a.m. An Assembly committee hearing has not yet been scheduled. Legislators need to hear from members of communities impacted by PFAS pollution on what amendments are needed to make the bill helpful for those who cannot safely drink their water.



UPDATE – July 11, 2023 – excerpts from https://www.wispolitics.com/2023/stalled-pfas-bill-holds-back-125-million-in-funding-to-fight-forever-chemicals/

Following Gov. Tony Evers' signing of the state budget, \$125 million to combat PFAS contamination remains in limbo as lawmakers discuss potential changes to GOP legislation to tackle the forever chemicals. Sen. Eric Wimberger told WisPolitics he had hoped to get the measure approved before September, but said efforts to get the bill to Evers' desk will likely stretch into the fall because it is "too complicated" to get done The bill would implement a sooner. municipal grant program for per- and polyfluoroalkyl chemicals testing and mitigation, but would also limit the Department of Natural Resources' authority to regulate PFAS.

Evers had proposed more than \$106 million in the budget to address PFAS, but Republicans rejected his plan. The DNR has said it will need more staff and money to implement the GOP bill. Sen. Kelda Roys, who sits on the Joint Finance Committee, criticized bill language that would mean DNR would have to go to the committee to get the funding. The dollars can't be used unless the bill is signed into law, at which time DNR would have to go to JFC to request it.

She also argued that restrictions on DNR authority to regulate PFAS shift liability from polluters to taxpayers. She said while public funds will play an important role in PFAS cleanup, "we should absolutely not be directing those scarce public resources to letting polluters off the hook."

Despite a recent substitute amendment to the bill led by Wimberger and fellow Green Bay-area Republican Sen. Rob Cowles, environmental groups also worry about bill language they think would undermine DNR's ability to combat PFAS.

The amendment made a variety of changes, including eliminating a provision limiting when a municipality can annex a territory for which water or sewerage services have been extended beyond its boundaries due to a public health concern. But the section on DNR authority is still in the bill.

For more information, updates about progress of PFAs legislation, etc. in WI, visit:

- https://dnr.wisconsin.gov/topic/Drinking Water/NR809.html
- https://www.wehnonline.org/pfas-wisconsin
- https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas
- https://www.ewg.org/interactive-maps/pfas_contamination/

Outdoor Learning with T.O.A.D. this Summer!

Teaching Outdoor Awareness & Discovery (T.O.A.D.) environmental education programs are keeping Anne Bartels, Information & Education Specialist - of the Land Information Department - busy this summer! County libraries, the YMCA, the Marinette Logging Fest, Marinette REC day camp, & Crivitz Youth, Inc. are some of the venues participating in TOAD programs this summer. And many schools have already scheduled TOAD programs into next spring!



Above: Crivitz Library held a program on pollinators; below, the YMCA had 4 different topics during 4-day nature week – below was a program "All Creatures Great & Small" about animal groups & classification.





Anne Bartels talks about organisms like mosses and insects that help decompose trees in Badger Park in a program called "Nature's Recyclers" for the Peshtigo Library.



https://hort.extension.wisc.edu/foundations-ingardening/?utm_source=facebook&utm_medium=ad&utm_campaign=2023+Found
ations+Ad+1



Registration is now open for "Growing and Caring for Plants in Wisconsin: Foundations in Gardening". This twelve-week online course covers all the basics for being a successful grower of plants.

Learn about growing plants in a way that helps you plan for gardening success, prevent plant problems before they start, and manage issues when they happen. You'll leave the course with a combination of practical gardening skills to try plus the knowledge of why they work. At the end of the course, you'll be able to:

- Link gardening practices and biology to preventing plant problems.
- Explain how to select, grow, and maintain the health of different kinds of plants.
- ldentify strategies to manage plant problems.
- Explain what Integrated Pest Management is and how it benefits you and the environment.

<u>Course dates:</u> September 10-December 9, 2023. Course is self-study and highly flexible. Course material accessible through August 2024.

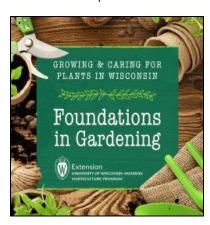
Course fee:

- Early Bird: \$299, includes electronic version of manual (PDF). Need-based scholarships available during Early Bird registration only. Early Bird registration runs July 17-August 14.
- Regular: \$325, includes electronic version of manual (PDF). Regular registration runs August 15-31.
- Green Industry commercial professionals: Want to send a group through the course? Ask us about our group deals! Email gardening.course@extension.wisc.edu to set up a time to meet to see if this course is right for your team and to learn about group discounts.



Additional optional add-ons:

- Manual Hard Copy: \$33
 Register during Early Bird registration and receive your manual prior to the course start date!
- Online Labs: \$40



Course Overview:

What: Online, complete-at-your-own pace gardening course. Includes 13 modules with online videos, readings, activities, and additional resources. Hear directly from Extension experts through videos and live Q & A with the Experts webinars! The course includes an electronic (PDF) copy of the course training manual, available when the course begins.

When: September 10-December 9, 2023. Early Bird registration for the 2023 course will begin on July 17, 2023. Participants have access to course material through August 31, 2024. Modules open periodically and we provide a suggested calendar to help you complete the course by December 9th. Go through the course at your own pace when you have time.

Who: Foundations in Gardening is open to everyone! This course is considered an approved learning opportunity for the Wisconsin Extension Master Gardener Program in preparation to become a Wisconsin Extension Master Gardener. Visit the Wisconsin Master Gardener Website for more information.

How: This is an online course that uses Canvas, our online classroom, and Zoom.

Course topics: You'll cover a wide variety of topics to build a strong gardening knowledge foundation.

- General Gardening Practices
- Integrated Pest Management
- Soils
- Botany
- Insects
- Plant Diseases
- Wildlife
- Weeds
- Herbaceous & Woody Ornamentals
- Houseplants & Containers
- Fruits
- Vegetables
- Lawns

Scholarships are available – for more information, visit the website above. For more information about the Northern Lights Master Gardeners' Association, Inc. in Marinette County, visit https://www.facebook.com/people/Norther-n-Lights-Master-Gardeners-Association-Volunteers-NLMGA/100064749904702/.

What's New at the Harmony Arboretum & Demonstration Gardens?



There is a new display garden at Harmony! It's a "Whimsical Garden" displaying the 2023 All-America Selections (AAS) flowers and vegetables that have been "Tested Nationally & Proven Locally." Each AAS entry is tested for superior garden performance by horticulture professionals across North America. AAS Display Gardens provide the public with an opportunity to view the newest AAS Winners in an attractive well-maintained setting. To see other AAS display garden winners, see the map at https://all-americaselections.org/search-garden-displays/.



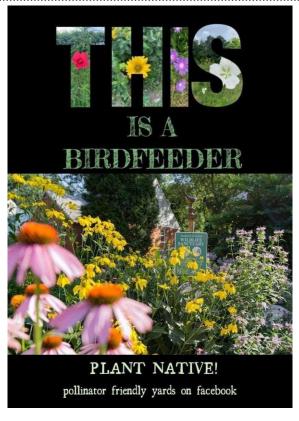
The Northern Lights Master Gardeners Association, Inc. worked hard to create a fantastic display!



There is also now a Native American garden display near the hedge maze in the Children's Learning Garden. A wigwam replica and a birch bark canoe photo-op space are part of this new display, along with informational signage.













Harmony Arboretum Schedule of Events



Located seven miles west of the City of Marinette off of Highway 64, then ½ mile south on County E. All programs are free and at Harmony Arboretum unless otherwise stated. For more information, call UW-Extension at 715-732-7510 or Land & Water Conservation at 715-732-7780.

August 3: Prairie Walk, 5:30 - 7:00 pm

Stroll the 17-acre prairie at Harmony Arboretum with local native plant enthusiasts. Spend an evening learning what constitutes a prairie and why people are creating or restoring them. The trail is about ½ mile and does cover some uneven terrain.

August 9: Fun with Kids in the Garden

A fun event just for kids and their adults to enjoy the gardens! Come spend some time at the Children's Learning Garden and explore the various areas of Harmony.

August 15: Astronomy at the Arboretum, 7:45p - Introduction to stars, constellations, star lore, and other space-related topics - includes a stargazing tour. Dress for the weather, beverages will be provided; if rain or mostly overcast, event will be cancelled. Call the Land & Water Conservation office at the number above if you want to check the status of the program that day if weather is a concern.



Pollinator Invitation Gardens (P.I.G) from 2020-21 looking good!

Below are pictures from the garden at the UWGB Marinette campus. A ladybug and monarch egg are only two examples of the many insects using the garden!









Above is the pollinator garden at the YMCA in Menominee; below is the garden at the Inferno Fitness Club in Marinette. Both gardens were installed in 2021.





Above, the new garden at Wausaukee's Library Installed in early June this year. Below, the Pollinator garden at Crivitz Elementary School, installed in 2019 – one of the several gardens that were the inspiration for the P.I.G. project of 2020-2021.





